

GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: June 27, 2003, 02:18:18 ; Search time 60 Seconds
(without alignments)
5545.738 Million cell updates/sec

Title: US-09-508-710-1
Perfect score: 1085
Sequence: 1 caaacacagcacagatcg.....taaaaaaaaaaaaaaaaaa 1085

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 441362 seqs, 153338381 residues

Total number of hits satisfying chosen parameters: 882724

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : 1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	450.4	41.5	996	2	US-08-924-759-21
2	450.4	41.5	996	3	US-09-248-335-21
3	444.8	41.0	948	2	US-08-924-759-11
4	444.8	41.0	948	3	US-09-248-335-11
5	368.4	34.0	1228	3	US-09-248-335-43
6	203.2	18.7	773	3	US-09-248-335-39
7	202.6	18.7	902	3	US-08-924-747-5
8	202.6	18.7	902	4	US-09-247-373B-5
9	202.6	18.7	902	4	US-09-296-715-5
10	197	18.2	935	3	US-08-924-747-19
11	197	18.2	935	4	US-09-247-373B-19
12	197	18.2	935	4	US-09-296-715-19
13	196.2	18.1	971	3	US-09-248-335-65
14	195	18.0	911	2	US-08-924-759-9
15	195	18.0	911	3	US-09-248-335-9
16	194.8	18.0	1100	3	US-09-248-335-53
17	193.2	17.8	1068	3	US-09-248-335-73
18	186.2	17.2	967	3	US-09-248-335-51
19	183.8	16.9	895	2	US-08-924-759-23
20	183.8	16.9	895	3	US-09-248-335-23
21	182.8	16.8	904	3	US-09-248-335-69
22	178.8	16.5	970	3	US-09-248-335-47
23	177.8	16.4	946	4	US-08-924-747-11
24	177.8	16.4	946	4	US-09-247-373B-11
25	177.4	16.4	946	4	US-09-296-715-11
26	177.4	16.4	840	2	US-08-924-759-13
27	177.4	16.4	840	3	US-09-248-335-13

28 176.2 16.2 1013 3 US-09-248-335-71 Sequence 71, Appl
29 174.2 16.1 937 3 US-09-248-335-37 Sequence 37, Appl
30 173.8 16.0 840 3 US-09-248-335-45 Sequence 45, Appl
31 167.4 15.4 1074 3 US-09-248-335-67 Sequence 67, Appl
32 166.8 15.4 900 3 US-09-248-335-61 Sequence 61, Appl
33 164.4 15.2 756 3 US-09-248-335-49 Sequence 49, Appl
34 160.4 14.8 860 3 US-09-248-335-41 Sequence 41, Appl
35 160 14.7 934 3 US-09-248-335-55 Sequence 55, Appl
36 158.6 14.6 967 3 US-09-248-335-59 Sequence 59, Appl
37 155 14.3 960 3 US-09-248-335-57 Sequence 57, Appl
38 153.8 14.2 993 3 US-08-924-747-17 Sequence 17, Appl
39 153.8 14.2 993 4 US-09-247-373B-17 Sequence 17, Appl
40 153.8 14.2 993 4 US-09-296-715-17 Sequence 17, Appl
41 153.6 14.2 1179 4 US-09-247-373B-43 Sequence 43, Appl
42 148 13.6 872 3 US-09-248-335-63 Sequence 63, Appl
43 127.6 11.8 441 1 US-08-525-507-3 Sequence 3, Appl
44 91 8.4 3046 1 US-08-525-507-7 Sequence 7, Appl
45 87.6 8.1 885 3 US-08-924-747-23 Sequence 23, Appl

ALIGNMENTS

RESULT 1
US-08-924-759-21
; Sequence 21, Application US/08924759
; Patent No. 5962229
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEFE, DANIEL
; TITLE OF INVENTION: PLANT GLUTATHIONE-S-TRANSFERASE
; TITLE OF INVENTION: ENZYMES
; NUMBER OF SEQUENCES: 24
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E.I. DU PONT DE NEMOURS AND COMPANY
; STREET: 1007 MARKET STREET
; CITY: WILMINGTON
; STATE: DELAWARE
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 19898
; COMPUTER READABLE FORM:
; MEDIUM TYPE: DISKETTE, 3.50 INCH
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: MICROSOFT WORD FOR WINDOWS 95
; SOFTWARE: MICROSOFT WORD VERSION 7.0A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/924,759
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: FLOYD, LINDA AXAMETHY
; REGISTRATION NUMBER: 33,692
; REFERENCE/DOCKET NUMBER: CL-1128
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 302-892-8112
; TELEFAX: 302-773-0164
; INFORMATION FOR SEQ ID NO: 21:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 996 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: MAIZE
; IMMEDIATE SOURCE:
; CLONE: CBBS.PK0049.A11
US-08-924-759-21
Query Match 41.5%; Score 450.4; DB 2; Length 996;
Best Local Similarity 79.2%; Pred. No. 7.7e-84;


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; SOFTWARE: MICROSOFT WORD VERSION 7.0A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/924,759
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: FLOYD, LINDA AXAMETHY
; REGISTRATION NUMBER: 33,692
; REFERENCE/DOCKET NUMBER: CL-1128
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 302-892-8112
; TELEFAX: 302-773-0164
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 948 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: maize
; IMMEDIATE SOURCE:
; CLONE: ceb5.pk0051.f8
; US-08-924-759-11

; Query Match 41.0%; Score 444.8; DB 2; Length 948;
; Best Local Similarity 81.0%; Pred. No. 1.1e-82;
; Matches 557; Conservative 0; Mismatches 122; Indels 9; Gaps 3;
QY 43 GCAATGCGGGCGAGAGGGGCTGGTCTGCTGGAATCTTCTGGGTGAGCCCGCTTCGGGCGAG 102
Db 21 GCGGGGAGACGAGAGAGGGCCCTGGTCTGCTGACTTCTGGGTGAGCCCGCTTCGGGCGAG 80
QY 103 CGCGTGCATCGCGCTGGCGGAGAGGGCTGCTCCCTACAGTACGCGGAGGAGGAGCTG 162
Db 81 CGTGGCGCATCGCGCTGGCGGAGAGGGCATGCGCTACGAGTACTCGGAGGAGGAGCTG 140
QY 163 ATGGCCGG---CAAGAGCGACCGCTCTCTCGGCGCAACCGCGTGCAATAAGAGATCCCG 219
Db 141 CTGGGCGGCGCAAGAGGACATCTCTCTCGCTCCAAACCGGTGCAAGAGATCCCC 200
QY 220 GTGCTCTCCACGAGCGCGTGGCTCAAGAGTCCCTCATCATCTCATCTCCAGTACCTGGAG 279
Db 201 GTGCTCTCCACGAGCGCGCGCTGCGAGTCCCTCGTCTCATCTCGAGTACCTCGAG 260
QY 280 GAGGCTTCCCGA---CGCGCGCTCTGCTCCCTCCGACCCCTACGCGCGCGCGAG 336
Db 261 GAGGCTTCCCGAGGCTCTCCCGAGGCTCTCCCGACCGCGCTACGCGCGCGCGAG 320
QY 337 GCGCGCTTCTGGGCGGACTACGTCGACAGAGGTCTACGACTGCGGCTCCCGCTCTGG 396
Db 321 GCGCGCTTCTGGGCGGCTACTCCGAC---AAGTCTACAAAGCGCGGACGCGCTGTGG 377
QY 397 AAGCTCAAGGGCGAGCGAGCGAGCGCGCGCGCGAGATGCTGACATCTCTCAAGACC 456
Db 378 AAGCTCAAGGGCGAGCGAGCGCGCGCGCGAGATGCTGACAGTCTGTCGAGTCCGGAAC 437
QY 457 CTGACGCGCGCTCGGGGACAGCCCTTCTCGGCGGCGACAGTTCGGGTTCTGTCGAC 516
Db 438 CTGACGCGCGCTAGGGGACAGGCTTCTTTCGCGCGGAGGCGCTTCGGGTTCTGTCGAC 497
QY 517 GCGGCTTTCGCGCTTTCACCGCGTGTGTTCCACAGCTTACGAGAGGTACGCGGATTCAGC 576
Db 498 GTGGCGCTCTGCGCTTCTGTCGCTGGCTCCCGAGCTACGAGCGGTACGCGGATTCAGC 557
QY 577 CTGCGGAGGTGGCGCCCAAGATCGCGCGTGGGCCAAGCGCTCGCGGAGCGGAGAGC 636
Db 558 GTGGCGGAGATCGCGCCCAAGCTGGCGCGTGGCGCGCGCTGCGCGAGCGGAGAGC 617
QY 637 GTGCGCAAGAGCTCTACTCGCGGACAGGTTGTAAGCTTCTATCGGCTTCTCAAGAAG 696
;
; Query Match 41.0%; Score 444.8; DB 3; Length 948;
; Best Local Similarity 81.0%; Pred. No. 1.1e-82;
; Matches 557; Conservative 0; Mismatches 122; Indels 9; Gaps 3;
QY 43 GCAATGCGGGCGAGAGGGGCTGGTCTGCTGGAATCTTCTGGGTGAGCCCGCTTCGGGCGAG 102
Db 21 GCGGGGAGACGAGAGAGGGCCCTGGTCTGCTGACTTCTGGGTGAGCCCGCTTCGGGCGAG 80
QY 103 CGCGTGCATCGCGCTGGCGGAGAGGGCTGCTCCCTACAGTACGCGGAGGAGGAGCTG 162
Db 81 CGTGGCGCATCGCGCTGGCGGAGAGGGCATGCGCTACGAGTACTCGGAGGAGGAGCTG 140
QY 163 ATGGCCGG---CAAGAGCGACCGCTCTCTCGGCGCAACCGCGTGCAATAAGAGATCCCG 219
Db 141 CTGGGCGGCGCAAGAGGACATCTCTCTCGCTCCAAACCGGTGCAAGAGATCCCC 200
QY 220 GTGCTCTCCACGAGCGCGTGGCTCAAGAGTCCCTCATCATCTCATCTCCAGTACCTGGAG 279
Db 201 GTGCTCTCCACGAGCGCGCGCTGCGAGTCCCTCGTCTCATCTCGAGTACCTCGAG 260
QY 280 GAGGCTTCCCGA---CGCGCGCTCTGCTCCCTCCGACCCCTACGCGCGCGCGAG 336
Db 261 GAGGCTTCCCGAGGCTCTCCCGAGGCTCTCCCGACCGCGCTACGCGCGCGCGAG 320
QY 337 GCGCGCTTCTGGGCGGACTACGTCGACAGAGGTCTACGACTGCGGCTCCCGCTCTGG 396
Db 321 GCGCGCTTCTGGGCGGCTACTCCGAC---AAGTCTACAAAGCGCGGACGCGCTGTGG 377
QY 397 AAGCTCAAGGGCGAGCGAGCGAGCGCGCGCGAGATGCTGACATCTCTCAAGACC 456
Db 378 AAGCTCAAGGGCGAGCGAGCGCGCGCGCGAGATGCTGACAGTCTGTCGAGTCCGGAAC 437
QY 457 CTGACGCGCGCTCGGGGACAGCCCTTCTCGGCGGCGACAGTTCGGGTTCTGTCGAC 516
Db 438 CTGACGCGCGCTAGGGGACAGGCTTCTTTCGCGCGGAGGCGCTTCGGGTTCTGTCGAC 497
QY 517 GCGGCTTTCGCGCTTTCACCGCGTGTGTTCCACAGCTTACGAGAGGTACGCGGATTCAGC 576
Db 498 GTGGCGCTCTGCGCTTCTGTCGCTGGCTCCCGAGCTACGAGCGGTACGCGGATTCAGC 557
QY 577 CTGCGGAGGTGGCGCCCAAGATCGCGCGTGGGCCAAGCGCTCGCGGAGCGGAGAGC 636
Db 558 GTGGCGGAGATCGCGCCCAAGCTGGCGCGTGGCGCGCGCTGCGCGAGCGGAGAGC 617
QY 637 GTGCGCAAGAGCTCTACTCGCGGACAGGTTGTAAGCTTCTATCGGCTTCTCAAGAAG 696
;
; Query Match 41.0%; Score 444.8; DB 3; Length 948;
; Best Local Similarity 81.0%; Pred. No. 1.1e-82;
; Matches 557; Conservative 0; Mismatches 122; Indels 9; Gaps 3;
QY 43 GCAATGCGGGCGAGAGGGGCTGGTCTGCTGGAATCTTCTGGGTGAGCCCGCTTCGGGCGAG 102
Db 21 GCGGGGAGACGAGAGAGGGCCCTGGTCTGCTGACTTCTGGGTGAGCCCGCTTCGGGCGAG 80
QY 103 CGCGTGCATCGCGCTGGCGGAGAGGGCTGCTCCCTACAGTACGCGGAGGAGGAGCTG 162
Db 81 CGTGGCGCATCGCGCTGGCGGAGAGGGCATGCGCTACGAGTACTCGGAGGAGGAGCTG 140
QY 163 ATGGCCGG---CAAGAGCGACCGCTCTCTCGGCGCAACCGCGTGCAATAAGAGATCCCG 219
Db 141 CTGGGCGGCGCAAGAGGACATCTCTCTCGCTCCAAACCGGTGCAAGAGATCCCC 200
QY 220 GTGCTCTCCACGAGCGCGTGGCTCAAGAGTCCCTCATCATCTCATCTCCAGTACCTGGAG 279
Db 201 GTGCTCTCCACGAGCGCGCGCTGCGAGTCCCTCGTCTCATCTCGAGTACCTCGAG 260
QY 280 GAGGCTTCCCGA---CGCGCGCTCTGCTCCCTCCGACCCCTACGCGCGCGCGAG 336
Db 261 GAGGCTTCCCGAGGCTCTCCCGAGGCTCTCCCGACCGCGCTACGCGCGCGCGAG 320
QY 337 GCGCGCTTCTGGGCGGACTACGTCGACAGAGGTCTACGACTGCGGCTCCCGCTCTGG 396
Db 321 GCGCGCTTCTGGGCGGCTACTCCGAC---AAGTCTACAAAGCGCGGACGCGCTGTGG 377
QY 397 AAGCTCAAGGGCGAGCGAGCGAGCGCGCGCGAGATGCTGACATCTCTCAAGACC 456
Db 378 AAGCTCAAGGGCGAGCGAGCGCGCGCGCGAGATGCTGACAGTCTGTCGAGTCCGGAAC 437
QY 457 CTGACGCGCGCTCGGGGACAGCCCTTCTCGGCGGCGACAGTTCGGGTTCTGTCGAC 516
Db 438 CTGACGCGCGCTAGGGGACAGGCTTCTTTCGCGCGGAGGCGCTTCGGGTTCTGTCGAC 497
QY 517 GCGGCTTTCGCGCTTTCACCGCGTGTGTTCCACAGCTTACGAGAGGTACGCGGATTCAGC 576
Db 498 GTGGCGCTCTGCGCTTCTGTCGCTGGCTCCCGAGCTACGAGCGGTACGCGGATTCAGC 557
QY 577 CTGCGGAGGTGGCGCCCAAGATCGCGCGTGGGCCAAGCGCTCGCGGAGCGGAGAGC 636
Db 558 GTGGCGGAGATCGCGCCCAAGCTGGCGCGTGGCGCGCGCTGCGCGAGCGGAGAGC 617
QY 637 GTGCGCAAGAGCTCTACTCGCGGACAGGTTGTAAGCTTCTATCGGCTTCTCAAGAAG 696
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Db      618 GTGGCCAGAGACCTTACCCGCGGAAGAGTGGACGATTTCATCAACCTGCTCAAGAG 677
Qy      697 AAGTACGGCATCGAGTAGCGCGCGAC 724
Db      678 ACCTACGGCATCGAGTAGTAGAGCGAC 705

RESULT 5
US-09-248-335-43
; Sequence 43, Application US/09248335
; Patent No. 6096504
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEF, DANIEL
; TITLE OF INVENTION: PLANT GLUTATHIONE-S-TRANSFERASE ENZYMES
; FILE REFERENCE: CL-1128-A
; CURRENT APPLICATION NUMBER: US/09/248,335
; CURRENT FILING DATE: 1999-02-10
; EARLIER APPLICATION NUMBER: 08/924,759
; EARLIER FILING DATE: 1997-September-05
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Microsoft Word Version 7.0A
; SEQ ID NO 43
; LENGTH: 1228
; TYPE: DNA
; ORGANISM: maize
US-09-248-335-43

Query Match      34.0%; Score 368.4; DB 3; Length 1228;
Best Local Similarity 73.2%; Pred. No. 4.9e-67;
Matches 514; Conservative 0; Mismatches 181; Indels 7; Gaps 3;

Qy      19  GGTGAGATTCAAGCAACCGGAGCAATGGCGGCGAAGAGGGCTGCTGTCTGGAC 78
Db      166  GGCCGATCGACCGAGCAGCTGGTGGCAATGGCGGCGGCGGAGTCTGTCTGTGGAC 225
Qy      79  TTCTGGGTGAGCCGTTGGGAGCGCGTGGCATCGCTGGCTGGCGAGAGGCGCTGGCC 138
Db      226  TTCTGGGTGAGCCCTTTCGGGAGCGCTGCCGATCGCGCTGGCGAGAGGCGCTGGCC 285
Qy      139  TACGAGTACCGGAGGAGACCTGATGGCGGCGCAAGAGCAGCGCTCTCCGCGCAAC 198
Db      286  TACGAGTACCGGAGCAGACCTCTG---GACAGGGGAGCTGCTCTCCGCTCCAC 342
Qy      199  CCGGTGCATAAAGATCCCGTGTCTCCACGACGGCGGTGCCGTCAACGAGTCCCTC 258
Db      343  CCCATCCACAAGAATCCCGTCTGTCTCCACGCGCGGAGCGCGCTGTGCGAGTCTC 402
Qy      259  ATCATCTCCAGTACTGAGGAGGCGCTTCCGAGCGCGCGCTGCTGCTCCCG---TCC 315
Db      403  GTCATCTCCAGTACTGAGGAGGCGCTGCGCGAGCTGCGCGCGCTCTCTCCCGAAGGAC 462
Qy      316  GACCCCTACCGCGCGCGAGGCGCCCTTCTGGGCGGACTAGTCTGACAAAGAGTCTAC 375
Db      463  GACCCCTACCGCGCGCGAGGCGGCTTCTGGGCGGATTATCATGACAAAGATCTAT 522
Qy      376  GACTGCGGCTCCCGCTCTGGAAGTCAAGGGGAGCGCGGAGCGCGCGCGCGAG 435
Db      523  GACAGCCAGACTCGGCTGTGGAAGTTCGAGGGGCGAGGCGCGGAGCAGGCGAAGAGGAC 582
Qy      436  ATGCTGGACATCTCAAGACCTTCGACGGCGCTCGGGGACAGGCCCTTCTTCGCGGC 495
Db      583  CTGGTGGAGGTCCTGGAGA-CTTGGAGGGGAGCTCGCCGAAAGCTTCTTCGCGCGC 641
Qy      496  GACAAGTTCGGGTTCCTGACCGCGCTTTCGCGCCCTTCCACCGCTGGTTCACACAGCTAC 555
Db      642  GGGCCCTTCGGCTTCGTGAGCGTGGCTCTGTGTGCCCTTCACTGCTGTCTTCGCGCTAC 701
Qy      556  GAGAGTACGGGAGTTCAGCTTCGCGAGGTGGCGCCCAAGATCGCCCGCTGGGCGCAAG 615
Db      702  GAGAAGCTGGGCGGGTTCAGCGTCCAGGAGCACTGGCCCCCAGGATCTGTGGCCCTGGGCGCG 761
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Qy      616  CGCTGGCGGAGCGGAGAGCGTCCCAAGAGCCTTACTCGCGGACAAAGTGTACGAC 675
Db      762  CGCTGCAGGGAGCGGAGAGCGTGGCCAAGCCATGTCCGACCTGCCAAGGTGCTCGAG 821
Qy      676  TTCATCGGCCTGCTCAAGAAGAAGTAGCGCATCGAGTAGGCG 717
Db      822  TTCGTCCAGTTCCTCCAGAGCAAGTTCGGGCCAAGTGATCG 863

RESULT 6
US-09-248-335-39
; Sequence 39, Application US/09248335
; Patent No. 6096504
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEF, DANIEL
; TITLE OF INVENTION: PLANT GLUTATHIONE-S-TRANSFERASE ENZYMES
; FILE REFERENCE: CL-1128-A
; CURRENT APPLICATION NUMBER: US/09/248,335
; CURRENT FILING DATE: 1999-02-10
; EARLIER APPLICATION NUMBER: 08/924,759
; EARLIER FILING DATE: 1997-September-05
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Microsoft Word Version 7.0A
; SEQ ID NO 39
; LENGTH: 773
; TYPE: DNA
; ORGANISM: maize
US-09-248-335-39

Query Match      18.7%; Score 203.2; DB 3; Length 773;
Best Local Similarity 59.2%; Pred. No. 2.9e-33;
Matches 406; Conservative 0; Mismatches 266; Indels 12; Gaps 3;

Qy      50  CGGCGAGAAGGGGTGCTGTCTGTGGACTTCTGGGTGAGCCCTTTCGGGAGCGCGTGC 109
Db      1  CGGAGCGCAGCAGCTGAAGGTGCTGGCCCTGTGGACGAGCCGTTCTGTATCCGGGTCC 60
Qy      110  GCATCGCGCTGGCGAGAGAGGCGCTGCCCTACGAGTAGCGGAGAGAGACCTGATGGCG 169
Db      61  GCATCGTCTCAACCTCAAGGGCCTGGGCTACGAGTACGTGGAGGACAC---TCGGCA 117
Qy      170  GCAAGAGCGACCGCTCTCCGCGCAACCGGTGTCATAAGAAGATCCGGTGTCTCTCC 229
Db      118  ACAAGAGCGCGTCTCTGTCTAGCTTCAACCCGGTGCACAAGACCGTCCCGTGTCTCTCC 177
Qy      230  ACAGCGGCGGTGCGCTCAACGAGTCCCTCATCTCTCCAGTACCTGAGGAGGCGCTTCC 289
Db      178  ACGCGGTGCGCCCGTAAACGAGTCCCAAGATCATCTGACGTACATCGACGAGGTCTGG 237
Qy      290  CGG---ACGCGCGCGCTGTCTGCCCTCGACCCCTAGCGGCGCGCGAGCGCGCTTCT 346
Db      238  CGGGACCGGGCGCGCGCTGTCTGCGCGCGACCCCTATGAGCGCGCGCGCGGCTTCT 297
Qy      347  GGGCGGACTAGCTCGACAAGAAGGTCTACGAC-----TGGCGGTCCCGCTCTGGAAGC 400
Db      298  GGGCGGCTATATCGACGACGAGTGAAGTCCGCTGCTGGCATGCTGTTCAGTGCA 357
Qy      401  TCAAGGGGAGCGCGAGCGCGCGCGCGCGCGTGGCGCGCGCGCGAGCGCTCGGAGCTCG 460
Db      358  GGGACGAGGGGGAGCGGGCGGAGCGGTGGCGCGCGCGCGCGAGCGCTCGGAGCTCG 417
Qy      461  ACGGGCGCTCGGGGACAAGCCCTTCTTCGCGCGGCGACAAGTTCGGGTTCGTCAGCGCG 520
Db      418  AGGGCGCGCTCAGGGGAAAGCCCTTCTTCGCGCGGCGACGGCTTCGGTTCGAGACCG 477
Qy      521  CTTTCGCGCCCTTACCCGCTGGTGTCCACAGCTACGAGAGGTACGGCGAGTTCAGCCGTC 580
Db      478  TGCTCGGCGGTACCTCGCTGGTGGTGGGCGGTGGCGAGGATCATCGCGCGAGGCTGA 537
Qy      581  CGGAGGTGGCGCCCAAGATCGCCGCTGGGCGCAAGCGCTGCGGGGAGCGAGAGCGTTCG 640
Db      538  TCGACCCGACTAAGACCGCGCTGTGGCGCGGTGGAGGACCGGTTCGCGCGCCCGACG 597
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QY 641 CCAAGAGCCTCTACTCGCGGACAAAGGTGTACGACTTCTATCGCGTCTCAAGAGAACT 700
Db 598 TGGCCAAAGGCGTGTACCGGACGAGCTGCAAGATGCTCGGTTCTCTGGAGACCTGCG 657
QY 701 ACGGCATCGAGTAGGCGCGCCGACGG 726
Db 658 TCGCGAACTACTTCTCAAGTGACTG 683

RESULT 7
US-08-924-747-5
; Sequence 5, Application US/08924747
; Patent No. 6063570
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; TITLE OF INVENTION: SOYBEAN GLUTATHIONE-S-TRANSFERASE
; TITLE OF INVENTION: ENZYMES
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E.I. DU PONT DE NEMOURS AND COMPANY
; STREET: 1007 MARKET STREET
; CITY: WILMINGTON
; STATE: DELAWARE
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 19898
; COMPUTER READABLE FORM:
; MEDIUM TYPE: DISKETTE, 3.50 INCH
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: MICROSOFT WORD FOR WINDOWS 95
; SOFTWARE: MICROSOFT WORD VERSION 7.0A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/924, 747
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: FLOYD, LINDA AXAMETHY
; REGISTRATION NUMBER: 33,692
; REFERENCE/DOCKET NUMBER: CL-1108
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 302-892-8112
; TELEFAX: 302-773-0164
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 902 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: SOYBEAN
; IMMEDIATE SOURCE:
; CLONE: GSTA
US-08-924-747-5

Query Match 18.7%; Score 202.6; DB 3; Length 902;
Best Local Similarity 58.1%; Pred. No. 4e-33;
Matches 377; Conservative 0; Mismatches 269; Indels 3; Gaps 1;
QY 67 GTGCTGCTGGACTTCTGGGTGAGCCCGTTCGGGACGCGGTGGGATCGCGTGGCCGAG 126
Db 15 GTGTTATTAGAGTTCTGGCCAAAGTCCATTGGGATGAGGGTTCAGGATTGCACTTGTCTGAA 74
QY 127 AAGGGCTGCTTACGAGTACGGGAGGAGGACTGATGGCGGCAAGAGCGACCGCTC 186
Db 75 AAGGGTATCAATATAGTACAAAGAGAGGACTTGAGGAA---CAAGAGTCTCTTCTC 131
QY 187 CTCGCGCCCAACCGGTGCAATAGAGATCCCGGTCTCTCCACGACGGCGGTGCCGTC 246
Db 132 CTCCAATAGAACCGGTTACAGAGAGATTCGGTTCTCATCCACATGGCAACCCATT 191

QY 247 AACGAGTCCCTCATCATCTCCAGTACCTGGAGGAGCGCTTCCCGAGCGCGCCGCTCTG 306
Db 192 TGTGAATCCCTCATTTGCTGTTCAGTACATTTGAGGAGGTTTGGAAATGACAGAAATCCCTTG 251
QY 307 CTCCTCTCGAGCCCTTAGCGCGCGAGGCGCCGCTTCTGGGCGGACTTACCTGCGACAG 366
Db 252 TTGCCTTCTGACCTTACCAGAGAGCTCAGACTAGATTCTGGGCTGATTATGTTGATAG 311
QY 367 AAGGTCTACGACTCGGCTCCGCTCTGGAAGCTCAAGGGCGAGCGCGAGCGGAGCGG 426
Db 312 AAGATATATGATCTTTGGAAGGAAGATTTCGACATCAAAAGGAGAGAAAGAAAGCTGCC 371
QY 427 CGCGCGGAGATGCTCGACATCTCAGACCCCTCGAGCGCGCGCTCGGGAGCAAGCCCTTC 486
Db 372 AAGAAGGAGTTTCATAGAACCCCTTAAATTGTTGGAGGAACAGCTGGGAGACAAGACTTAT 431
QY 487 TTCGGCGGCGCAAGTTCGGGTTTCGTGACGCGCGCTTCGCGCCCTTACCCTGCTGGTTC 546
Db 432 TTTGGAGGAGACAATCTAGGTTTTCGGATATAGCGCTTGTTCCATTCTACACTTGGTTC 491
QY 547 CACAGCTACGAGAGGTACGGCGAGTTCAGCTTCGCGGAGGTGGCGCCCAAGATCGCCGG 606
Db 492 AAAGCTATGAGACTTTTGGCACCCCTCAACATAGAGAGTGAAGTGCCTTATTTGCT 551
QY 607 TGGGCCAAGCGCTGCGCGAGCGGAGAGCGCTCGCCAGAGCGCTCTACTCGCGGACAG 666
Db 552 TGGGCCAAGAGGTGCTTCAGAAAGAAAGCGTTGCCAAGTCTCTTCTCTGATCAGCAAAAG 611
QY 667 GTGTACGACTTCATCGGCTGCTCAAGAAAGAGTACGGCATCGAGTAGG 715
Db 612 GTTTATGAGTTTCATGGAICTAGAAAGAGTAGGCTAGGCTAGG 660

RESULT 8
US-09-247-373B-5
; Sequence 5, Application US/09247373B
; Patent No. 6168954
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEFE, DANIEL
; TITLE OF INVENTION: SOYBEAN GLUTATHIONE-S-TRANSFERASE ENZYMES
; FILE REFERENCE: CL-1108-A
; CURRENT APPLICATION NUMBER: US/09/247, 373B
; CURRENT FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 08/924, 747
; PRIOR FILING DATE: 1997-09-05
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 5
; LENGTH: 902
; TYPE: DNA
; ORGANISM: SOYBEAN
US-09-247-373B-5

Query Match 18.7%; Score 202.6; DB 4; Length 902;
Best Local Similarity 58.1%; Pred. No. 4e-33;
Matches 377; Conservative 0; Mismatches 269; Indels 3; Gaps 1;
QY 67 GTGCTGCTGGACTTCTGGGTGAGCCCGTTCGGGACGCGGTGGGATCGCGTGGCCGAG 126
Db 15 GTGTTATTAGAGTTCTGGCCAAAGTCCATTGGGATGAGGGTTCAGGATTGCACTTGTCTGAA 74
QY 127 AAGGGCTGCTTACGAGTACGGGAGGAGGACTGATGGCGGCAAGAGCGACCGCTC 186
Db 75 AAGGGTATCAATATAGTACAAAGAGAGGACTTGAGGAA---CAAGAGTCTCTTCTC 131
QY 187 CTCGCGCGCAACCGGTGCAATAGAGATCCCGGTCTCTCCACGACGGCGGTGCCGTC 246
Db 132 CTCCAATAGAACCGGTTACAGAGAGATTCGGTTCTCATCCACATGGCAACCCATT 191
QY 247 AACGAGTCCCTCATCATCTCCAGTACCTCGAGGAGGCGCTTCCCGAGCGCGCCGCTCTG 306

Db 192 TGTGAATCCCTCATTGCTTTCAGTACATTCAGGAGGTTTGGATGACAGAAATCCCTTG 251
Qy 307 CTCCCTCCGACCTACGCGCGCGAGCCCGCTTCTGCGCGAGTACGTCGACAG 366
Db 252 TTGCTTCTGACCTTACACGAGAGCTCAGACTAGATTCTGGGCTGATTATGTTGATAAG 311
Qy 367 AAGGCTACGAGTACGCTCCGCTCTGGAAGCTCAAGGCGAGCGCGAGCGAGCG 426
Db 312 AAGATATATGATCTTGGAGGAAGATTGGACATCAAAAGAGAGAAAGAAAGAGCTGCC 371
Qy 427 CGCGCCGAGATGCTGGACATCCTCAAGACCCCTCGACGCGCGCTCGGCGGCAAGCCCTTC 486
Db 372 AAGAAGAGTTCATAGAGCCCTTAAATTGTTGGAGGACAGCTGGGAGACAGACTTAT 431
Qy 487 TTGCGCGCGACAGTTCGGGTTTCGTGACGCCCGCTTTCGGGCGCTTTCACCGGTGTTTC 546
Db 432 TTTGGAGAGACAATAGGTTTTCGTGATATAGGCTTGTTCATTTACACTTGGTTTC 491
Qy 547 CACAGCTACGAGAGTACGCGAGTTCAGCTCGCGGAGGTGGCGCCCAAGATCGCGCG 606
Db 492 AAGCCTATGAGCTTTTGGCACCCCTCAACATAGAGAGTGGTCCCAAGTTTATTGCT 551
Qy 607 TGGCCCAAGGCTCGCGAGCGAGAGCTCGCCCAAGAGCTCTACTCGCCCGACAG 666
Db 552 TGGCCCAAGAGTGCCTTCAGAAAGAAAGCGTTGCCAAGTCTCTTCTGATCAGCAAAAG 611
Qy 667 GTGTACGACTTCACGCGCTCTCAAGAGAGTACGCGATCGAGTAGG 715
Db 612 GTTTATGAGTTTCATTATGATCTAAGAAAGAGTTAGGCATTGAGTAGG 660

RESULT 9

US-09-296-715-5
; Sequence 5, Application US/09296715
; Patent No. 6171839
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEFE, DANIEL
; TITLE OF INVENTION: SOYBEAN GLUTATHIONE-S-TRANSFERASE
; TITLE OF INVENTION: ENZYMES
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E. I. DU PONT DE NEMOURS AND COMPANY
; STREET: 1007 MARKET STREET
; CITY: WILMINGTON
; STATE: DELAWARE
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 19898
; MEDIUM TYPE: DISKETTE, 3.50 INCH
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: MICROSOFT WORD FOR WINDOWS 95
; SOFTWARE: MICROSOFT WORD VERSION 7.0A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/296,715
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: FLOYD, LINDA AXAMETHY
; REGISTRATION NUMBER: 33,692
; REFERENCE/DOCKET NUMBER: CL-1108
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 302-892-8112
; TELEFAX: 302-773-0164
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 902 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO

; ORIGINAL SOURCE:
; TISSUE TYPE: SOYBEAN
; IMMEDIATE SOURCE:
; CLONE: GSTA
; US-09-296-715-5

Query Match 18.7%; Score 202.6; DB 4; Length 902;
Best Local Similarity 58.1%; Pred. No. 4e-33;
Matches 377; Conservative 0; Mismatches 269; Indels 3; Gaps 1;

Qy 67 GTCTGTGCTGACTTCTGGGTGAGCCCGTTTCGGGCGAGCGGTGCGCATCGCGTGGCGGAG 126
Db 15 GTGTATTAGAGTTCTGGCCAACTCCATTGGGATGAGGCTCAGGATTGCACTTGTCTGAA 74
Qy 127 AAGGCGCTGCCCTACAGATACGCGGAGGAGACCTGATGGCGCGGCAAGAGCGACCGCTC 186
Db 75 AAGGCTATCAAAATATAGTACAAAGAGAGGACTTGAAGAA---CAAGAGTCTCTTCTC 131
Qy 187 CTCGCGCGCAACCCGCTGATAGAGATCCCGGTGCTCTCCACGAGCGCGCTGCGCTC 246
Db 132 CTCCAATGAAACCCGTTTCAAGAAGATTCCGGTTCTATCCCAATGGCAAAACCAATT 191
Qy 247 AAGGAGTCCCTCATCATCTCTCCAGTACCTGGAGAGGAGCTTCCCGGACCGCGCTCTG 306
Db 192 TGTGAATCCCTCATCTGTTTCAATGATGAGAGGTTTGGATGACAGAAATCCCTTG 251
Qy 307 CTCCCTTCGACCCCTACGCGCGCGAGCGCCGCTTCTGGGCGGACTACGTCGACAG 366
Db 252 TTGCTTCTGACCCCTTACCAGAGAGCTCAGACTAGATTCTGGGCTGATTATGTTGATAAG 311
Qy 367 AAGTCTACGACTGCGCTCCCGCTCTGGAAGCTCAAGGCGAGCGCGAGCGCGAGCGG 426
Db 312 AAGATATATGATCTTGGAGGAAGATTGGACATCAAAAGAGAGAAAGAAAGAGCTGCC 371
Qy 427 CGCGCCGAGATGCTGGACATCTCAAGACCCCTCGAGCGCGCTCGGGGACAGCCCTTC 486
Db 372 AAGAAGGAGTTTCATAGAAGCCCTTAAATGTTGAGAGAACAGCTGGAGACAGACTTAT 431
Qy 487 TTGCGGCGGACAAAGTTTCGGGTTTCGTGAGCGCGCCCTTCGCGCCCTTACCGGTTGTTTC 546
Db 432 TTTGGAGGAGACAATCTAGGTTTGTGGATATAGCGCTTGTCCATTCTACACTTGGTTTC 491
Qy 547 CACAGCTACGAGAGTACGCGAGTTTCAGCTCGCGAGGTGGCGCCCAAGATCGCGCG 606
Db 492 AAGCCTATGAGACTTTTGGCACCTCAACATAGAGTGGTGGCCCAAGTTTATTGCT 551
Qy 607 TGGCCCAAGCGCTCGCGCGAGCGGAGAGCGTCCCAAGAGCTCTACTCGCGGACAG 666
Db 552 TGGCCCAAGAGTGCCTTCAGAAAGAAAGCGTTGCCAAGTCTCTTCTGATCAGCAAAAG 611
Qy 667 GTGTACGACTTCATCGGCCCTGCTCAAGAGAGTACGCGATCGAGTAGG 715
Db 612 GTTTATGAGTTTCATTATGATCTAAGAAAGAGTTAGGCATTGAGTAGG 660

RESULT 10

US-08-924-747-19
; Sequence 19, Application US/08924747
; Patent No. 6063570
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEFE, DANIEL
; TITLE OF INVENTION: SOYBEAN GLUTATHIONE-S-TRANSFERASE
; TITLE OF INVENTION: ENZYMES
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E. I. DU PONT DE NEMOURS AND COMPANY
; STREET: 1007 MARKET STREET
; CITY: WILMINGTON
; STATE: DELAWARE
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 19898
; COMPUTER READABLE FORM:

MEDIUM TYPE: DISKETTE, 3.50 INCH
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: MICROSOFT WORD FOR WINDOWS 95
SOFTWARE: MICROSOFT WORD VERSION 7.0A
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/924,747
FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: FLOYD, LINDA AXAMETHY
REGISTRATION NUMBER: 33,692
REFERENCE/DOCKET NUMBER: CL-1108
TELECOMMUNICATION INFORMATION:
TELEPHONE: 302-892-8112
TELEFAX: 302-773-0164
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 935 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
TISSUE TYPE: SOYBEAN
IMMEDIATE SOURCE:
CLONE: SSL.PK0005.E6
US-08-924-747-19

Query Match 18.2%; Score 197; DB 3; Length 935;
Best Local Similarity 58.3%; Pred. No. 5.7e-32;
Matches 383; Conservative 0; Mismatches 270; Indels 4; Gaps 2;

QY 59 AGGGCTGTGCTGTGGACTTCTGGGTGAGCCCGTTCGGGCGAGCGCGTGCAGCATCGCGC 118
DB 61 ATGAGGTGCTTCTCTGGATTCTGSCCAAGTCCATTTCGGATGAGGTCAGATGTCAC 120
QY 119 TGGCCGAGAGGGCTGCCCTACGAGTACGGGAGGAGGACCTGTATGGCGGCAAGAGCG 178
DB 121 TTGCTGAAAGGGTATCGAATATGATCAAGAGAGGACTTTGAGG---AACAAGAGTC 177
QY 179 ACCGCTCTCCGCGCCCAACCGGTGCATTAAGAAGATCCGGTGTCTCTCCACGAGCGC 238
DB 178 CTCCTCTTCAAAATGAACCGGTTCAAGAAGATTCGGTCTCATCCACAATGGCA 237
QY 239 GTGCGGTCAACAGTCCCTCATCATCTCCAGTACCTGAGGAGGCTTCCCGGAGCGCG 298
DB 238 AACCATTTCCGAAATCCCTCATTTGCTGTTCAGTATGAGGAGGTTTGGAAATGACAGAA 297
QY 299 CGGCTGTCTCCCTCCGACCCCTACGCGCGCGCGAGCCCGCTTCTGGGCGGACTACG 358
DB 298 ATCCCTGTGTGCTTCCAGACCCCTTACAGAGAGCTCAGGCTAGATTCTGGGCTGATTATG 357
QY 359 TCGACAGAGAGTCTACGACTCGCGCTCCGCTCTGGAAGCTCAAGGCGGAGCGCGCAGG 418
DB 358 TTGACATTAAAGATACATGA-TCTTGGAAAGAAATTTGGACATCAAGGAGAGAGAAAG 416
QY 419 CGCAGCGCGCGCGAGATGTGGACATCTTCAAGACCTTCGACGCGCGCTTCGGGACA 478
DB 417 AAGCTGCCAAGAGAGTTCATAGAGGCGCTTAAATTTGTTGGAGGAAACAGCTGGGAGATA 476
QY 479 AGCCCTTCTTCGCGCGGACAGATTTCGGGTTTCGTGACGCGCGCTTCGCGCCCTTCACCG 538
DB 477 AGACTTATTTTGGAGGAGACATATTTGTTTGTGGATATAGCACTTGTTCATCTCTACA 536
QY 539 CGTGGTTCCACAGCTACGAGAGGTACGCGAGTTTCAGGCTTCGCGAGGTGGCGCCCAAGA 598
DB 537 CTGTTTCAAGTCTATGAGACTTTTGGCAGCTCAACATTCAGATGAGTGCCTCCAGGT 596
QY 599 TCGCCCGTGGGCCCAAGCGCTGCGCGAGCGGAGAGCGTTCGCCAAGAGCCCTCTACTCGC 658
DB 597 TTGTTGCTTGGGCCAAGAGGTGCTTACAGAAAGAGAGTGTTCGAAGTCTCTTCTCTGATC 656
QY 659 CGGACAGAGTGTACGACTTCATCGCCCTGCTCAAGAGAGATGACGCAATCGAGTAGG 715

QY 659 CGGACAGAGTGTACGACTTCATCGCCCTGCTCAAGAGAGATGACGCAATCGAGTAGG 715
DB 657 AGCACAAGGTCTATGAGTTCGTTGTGGAGATAAGAAAGAGTGTAGTCTATCGAGTAGG 713

RESULT 11

US-09-247-373B-19
Sequence 19, Application US/09247373B
Patent No. 6168954
GENERAL INFORMATION:
APPLICANT: MCGONIGLE, BRIAN
APPLICANT: O'KEEFE, DANIEL
TITLE OF INVENTION: SOYBEAN GLUTATHIONE-S-TRANSFERASE ENZYMES
FILE REFERENCE: CL-1108-A
CURRENT APPLICATION NUMBER: US/09/247,373B
CURRENT FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 08/924,747
PRIOR FILING DATE: 1997-09-05
NUMBER OF SEQ ID NOS: 56
SOFTWARE: Microsoft Office 97
SEQ ID NO 19
LENGTH: 935
TYPE: DNA
ORGANISM: SOYBEAN
US-09-247-373B-19

Query Match 18.2%; Score 197; DB 4; Length 935;
Best Local Similarity 58.3%; Pred. No. 5.7e-32;
Matches 383; Conservative 0; Mismatches 270; Indels 4; Gaps 2;

QY 59 AGGGCTGTGCTGTGGACTTCTGGGTGAGCCCGTTCGGGCGAGCGCGTGCAGCATCGCGC 118
DB 61 ATGAGGTGCTTCTCTGGATTCTGSCCAAGTCCATTTCGGATGAGGTCAGATGTCAC 120
QY 119 TGGCCGAGAGGGCTGCCCTACGAGTACGGGAGGAGGACCTGTATGGCGGCAAGAGCG 178
DB 121 TTGCTGAAAGGGTATCGAATATGATCAAGAGAGGACTTTGAGG---AACAAGAGTC 177
QY 179 ACCGCTCTCCGCGCCCAACCGGTGCATTAAGAAGATCCGGTGTCTCTCCACGAGCGC 238
DB 178 CTCCTCTTCAAAATGAACCGGTTCAAGAAGATTCGGTCTCATCCACAATGGCA 237
QY 239 GTGCGGTCAACAGTCCCTCATCATCTCCAGTACCTGAGGAGGCTTCCCGGAGCGCG 298
DB 238 AACCATTTCCGAAATCCCTCATTTGCTGTTCAGTATGAGGAGGTTTGGAAATGACAGAA 297
QY 299 CGGCTGTCTCCCTCCGACCCCTACGCGCGCGCGAGCCCGCTTCTGGGCGGACTACG 358
DB 298 ATCCCTGTGTGCTTCCAGACCCCTTACAGAGAGCTCAGGCTAGATTCTGGGCTGATTATG 357
QY 359 TCGACAGAGAGTCTACGACTCGCGCTCCGCTCTGGAAGCTCAAGGCGGAGCGCGCAGG 418
DB 358 TTGACATTAAAGATACATGA-TCTTGGAAAGAAATTTGGACATCAAGGAGAGAGAAAG 416
QY 419 CGCAGCGCGCGCGAGATGTGGACATCTTCAAGACCTTCGACGCGCGCTTCGGGACA 478
DB 417 AAGCTGCCAAGAGAGTTCATAGAGGCGCTTAAATTTGTTGGAGGAAACAGCTGGGAGATA 476
QY 479 AGCCCTTCTTCGCGCGGACAGATTTCGGGTTTCGTGACGCGCGCTTCGCGCCCTTCACCG 538
DB 477 AGACTTATTTTGGAGGAGACATATTTGTTTGTGGATATAGCACTTGTTCATCTCTACA 536
QY 539 CGTGGTTCCACAGCTACGAGAGGTACGCGAGTTTCAGGCTTCGCGAGGTGGCGCCCAAGA 598
DB 537 CTGTTTCAAGTCTATGAGACTTTTGGCAGCTCAACATTCAGATGAGTGCCTCCAGGT 596
QY 599 TCGCCCGTGGGCCCAAGCGCTGCGCGAGCGGAGAGCGTTCGCCAAGAGCCCTCTACTCGC 658
DB 597 TTGTTGCTTGGGCCAAGAGGTGCTTACAGAAAGAGAGTGTTCGAAGTCTCTTCTCTGATC 656
QY 659 CGGACAGAGTGTACGACTTCATCGCCCTGCTCAAGAGAGATGACGCAATCGAGTAGG 715

Db 657 AGCAAGGTTCTATGAGTTCGTTGTGGAGATAAGAAAGAGTTAGTCATCGAGTAGG 713

RESULT 12

US-09-296-715-19
; Sequence 19, Application US/09296715
; Patent No. 6171839
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEFE, DANIEL
; TITLE OF INVENTION: SOYBEAN GLUTATHIONE-S-TRANSFERASE
; TITLE OF INVENTION: ENZYMES
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E.I. DU PONT DE NEMOURS AND COMPANY
; STREET: 1007 MARKET STREET
; CITY: WILMINGTON
; STATE: DELAWARE
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 19898
; COMPUTER READABLE FORM:
; MEDIUM TYPE: DISKETTE, 3.50 INCH
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: MICROSOFT WORD FOR WINDOWS 95
; SOFTWARE: MICROSOFT WORD VERSION 7.0A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/296.715
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: FLOYD, LINDA AXAMETHY
; REGISTRATION NUMBER: 33,692
; REFERENCE/DOCKET NUMBER: CL-1108
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 302-892-8112
; TELEFAX: 302-773-0164
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 935 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: SOYBEAN
; IMMEDIATE SOURCE:
; CLONE: SSL.PK0005.E6
; US-09-296-715-19

Query Match 18.2%; Score 197; DB 4; Length 935;
Best Local Similarity 58.3%; Pred. No. 5,7e-32;
Matches 383; Conservative 0; Mismatches 270; Indels 4; Gaps 2;
Qy 59 AGGGCTGGTGTCTGAGTCTTGGGTGAGCCGCTTGGGAGCGCGTGGCGATCGCGC 118
Db 61 ATGAGTGGTCTTCTGGATTCTGGCAAGTCCATTGGGATGAGGCTGAGATTGCAC 120
Qy 119 TGGCGAGAGGCTGCCCTACGATACGCGAGGAGGACTGATGCCGCGAGAGCG 178
Db 121 TTGCTGAAGAGGATTCGAATATGATCAAGAAGAGGACTTGAGG---AACAAAGTTC 177
Qy 179 ACCGGCTCTCCGCGCAACCGGTGCATAAGAAGATCCCGTGTCTCCACAGCGGCC 238
Db 178 CTCCTCTTCAAAATGACCGGGTTCAAGAAGATTCGGTCTCATCCACATGGCA 237
Qy 239 GTGGCGTCAAGAGTCCCTCATCATCTCCAGTACTGGAGAGAGCCCTTCGCGAGCGC 298
Db 238 AACCCATTCCGAATCCCTCATGTGTTTCAGTACATTGAGGAGGTTTGAATGACAGAA 297
Qy 299 CGGCTCTGCTCCCTCCGACCCCTACGCGCGCGCGAGCCCGCTTCTGGGCGGACTAGG 358

Db 298 ATCCCTTGTTCGCTTACAGCCCTTACAGAGAGCTCAGGCTAGATTCTGGGCTGATTATG 357
Qy 359 TCGACAAGAAAGGTCTACGACTCGGGTCCGCGCTCTCGAAGCTCAAGGGCGAGCCGCGAG 418
Db 358 TTGACATTAAAGATACATGA-TCITGGAAAGAAATTTGGACATCAAAAGGGAGAAAGAAAG 416
Qy 419 CGCAGGGCGCGCGGAGATGCTGGACATCTCTCAAGACCCCTCGAGCGGCGCGCTCGGGACA 478
Db 417 AAGCTGCCAAAGAGGAGTTTCATAGAGCCCTTAAATTTGTTGGAGGAACAGCTGGGAGATA 476
Qy 479 AGCCCTTCTTTCGCGCGGCAAGTTTCGGGTTTCGTTCGACGCGCGCTTCGCCCCCTTCACCG 538
Db 477 AGACTTATTTTGGAGGAGACAATTTGGTTTGTGATATAGACATTGTTCAATTCTACA 536
Qy 539 CGTGGTTCCACAGCTACGAGAGTACGGCGAGTTTCAGCTTCGCGAGGTGGCGCCCAAGA 598
Db 537 CTTGGTTCAAAGTCTATGAGACTTTTGGCAGCCCTCAACATTGGAATGAGTGCCTCCAGGT 596
Qy 599 TCGCCGCTGGGCGCAAGCGCTCGCGAGCGGGAGAGCGTCCGCAAGAGCTCTACTCGC 658
Db 597 TTGTTGCTTGGGCGAAGAGGTGCTTACAGAAAGAGAGTGTTCGAAAGTCTCTTCTCTGATC 656
Qy 659 CGGACAAGGTGTACGACTTTCATCGGCTGCTCAAGAAAGAGTACGGCATCGAGTAGG 715
Db 657 AGACAAGGTTCTATGAGTTCGTTGTGGAGATAAGAAAGAGTTAGTCTATCGAGTAGG 713

RESULT 13

US-09-248-335-65
; Sequence 65, Application US/09248335
; Patent No. 6095504
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEFE, DANIEL
; TITLE OF INVENTION: PLANT GLUTATHIONE-S-TRANSFERASE ENZYMES
; FILE REFERENCE: CL-1128-A
; CURRENT APPLICATION NUMBER: US/09/248,335
; CURRENT FILING DATE: 1999-02-10
; EARLIER APPLICATION NUMBER: 08/924,759
; EARLIER FILING DATE: 1997-September-05
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Microsoft Word Version 7.0A
; SEQ ID NO 65
; LENGTH: 971
; TYPE: DNA
; ORGANISM: maize
; US-09-248-335-65

Query Match 18.1%; Score 196.2; DB 3; Length 971;
Best Local Similarity 61.6%; Pred. No. 8.4e-32;
Matches 331; Conservative 0; Mismatches 203; Indels 3; Gaps 1;
Qy 42 AGCAATGGCGCGCGAGAGGGGCTGGTGTCTGCTGCACTTCTGGGTGAGCCCGTTTCGGGCA 101
Db 96 AGCAATAATGGCCGAGAGGGCGTGAAGGTGTTGGGGATGTGGCGAGCCCATGTTGAT 155
Qy 102 GCGGTGCGCATCCGCTTGGCCGAGAGGGCTTCCCTTACGAGTACGCGAGGAGGACCT 161
Db 156 CAGGCTGAGTGGCGCTGCGGCTGAAGGGCGTCAAGTACGAGTACGTCGACGAGGACC- 214
Qy 162 GATGCCGCGAGAGCGACCGCTCTCCGCGCCAAACCCGCTGCATAGAGATCCCGGT 221
Db 215 --TCGCCAACAGAGCGCCGACCTGTCTCCGCCCAACCCCGTGCACCAAGAGGTGCCCGT 272
Qy 222 GCTCTCTCACAGCGCGCTGCGCTCAACGAGTCCCTCATCATCTCCAGTACCTCGGAGGA 281
Db 273 GCTGTCCAAGCGGCAAGCGGTGCGGAGTCCACCATCATCTGTGAGTACATCGAGA 332
Qy 282 GGCCTTCCGGAACGCGCCGCTCTGTCTCCCTCCGACCCCTTACGCGCGCGAGGCGCG 341
Db 333 GGTCTGGAAGGGCGGTACCCCATCATGCGCGGGCGACCCCTTACGAGCGCGCCAGGCGAG 392
Qy 342 CTTCTGGGCGGACTACGTCGACAAGAGGTCTACGACTGGGCTCCCGCTCTCGAAGCT 401

Db 393 GTTCTGGGCGAGGTTGCGGAGACAGATGCTCAAGCTGCTCTGTACCCGATCTTACCGC 452
QY 402 CAAGGGCGAGCCGAGCGCGCGCGCGAGATGCTGAGCATCTTCAAGACCCCTCGA 461
Db 453 GACCGGCGAGCGCGAGCGCGAGCGGTCACGAGGCGCCAGCTGCTCAAGACCCCTGGA 512
QY 462 CGGCGGCTCGGGGACAGCCCTTCTTCGCGGCGGAGCAAGTTGCGGTTGCTGACGCGC 521
Db 513 GACCGGCTTGGAGGGGAGAAAGTTCTTCGCGGCGGAGCGCGCTGCGGCTACCTGACATCGT 572
QY 522 CTTTCGGCGCCTTACCGCGTGGTTCCACAGCTACGAGAGTACGGGAGTTTCAGCCT 578
Db 573 CGTGGGTGTTGCGGCACTGGCTCCCGCTCATCGAGAGGTACCGGCGCCAGCGT 629

RESULT 14
US-08-924-759-9
; Sequence 9, Application US/08924759
; Patent No. 5962229
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEFE, DANIEL
; TITLE OF INVENTION: PLANT GLUTATHIONE-S-TRANSFERASE
; TITLE OF INVENTION: ENZYMES
; NUMBER OF SEQUENCES: 24
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: E.I. DU PONT DE NEMOURS AND COMPANY
; STREET: 1007 MARKET STREET
; CITY: WILMINGTON
; STATE: DELAWARE
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 19898
; COMPUTER READABLE FORM:
; MEDIUM TYPE: DISKETTE, 3.50 INCH
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: MICROSOFT WORD FOR WINDOWS 95
; SOFTWARE: MICROSOFT WORD VERSION 7.0A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/924,759
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: FLOYD, LINDA AXAMETHY
; REGISTRATION NUMBER: 33,692
; REFERENCE/DOCKET NUMBER: CL-1128
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 302-892-8112
; TELEFAX: 302-773-0164
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 911 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cdna
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: MAIZE
; IMMEDIATE SOURCE:
; CLONE: CC71SE-B.PK0014.B8
; US-08-924-759-9

Query Match 18.0%; Score 195; DB 2; Length 911;
Best Local Similarity 57.5%; Pred. No. 1.5e-31;
Matches 411; Conservative 0; Mismatches 295; Indels 9; Gaps 3;
QY 39 GGGAGCAATGGCGGCGAGAGGGGCTGGTCTGCTGCACTTCTGGGTGAGCCGTTGCG 98
Db 5 GGTGCACATGTGCTCTCCGCGCGGTGAAGCTGATCGGCTTCTTCGGAGCCCGTACGC 64
QY 99 GCAGCGGTGGCATCGCTGGCGGAGAGGGGCTGCCCTACGAGTACGCGGAGGAGGA 158

Db 65 GTTCCGCGGAGGCGCGCTGTGCTGAAGGCTGCCGTACGAGCTGATCTCTGGAGA 124
QY 159 CTTGATGGCGGCGAGAGCGACCGCTCTCTCCGCGCAACCCCGGTGCATAAGAAGATCCC 218
Db 125 CTTGTTGCGCAGCAAGAGCGAGCTCTGCTCCACCAACAACCCCGTGCACAAGAAGGTGCC 184
QY 219 GGTGCTCTCCCA---CGAGGCGGTGCCGTCAACGAGTCCCTCATCATCTCTCGAGTACCT 275
Db 185 CGTGTCTCTCCACGCGGAGCGCGCGGCCCATCTCCGAGTCCCTGCTCATCGCGAGTACGT 244
QY 276 GGAGGAGGCTTTCGCGGAGCGCGCGCTGTGCTCCCTCGACCCCTCAGCGCGCGCGCA 335
Db 245 CGAGGAGGCTTTC---GACGCGCGCGCTGCTCCCCCGCGACCCCTACGCGCGCGCGC 301
QY 336 GCGCCGCTTCTGGGCGCACTACGTGCAACAAGAGTCTACGA---CTGGGGCTCCCGCCT 392
Db 302 CGCCCGCTTCTGGCGGACTTTCATGAGACCAAGGCTCACCAAGCCCTTCTTCATGGGAT 361
QY 393 CTGGAAGCTCAAGGGGAGCGCGAGCGCGAGCGCGCGCGCGAGATGCTGGAATCTCAA 452
Db 362 CTGGGTGGAGGAGCGCGAGCGCGCTGCGGTTCGAGAGGAGGCGCCAAAGAGCTCGTGGC 421
QY 453 GACCTTCGAGCGCGCTCGGGGACAAGCCCTTCTTCGCGGCGGACAAGTTCGGGTTCT 512
Db 422 GCTGCTGGAGGCGCAGCTCGAGGAAAGAGTTCTTCGCGCGCGGACAGGCGGGGTACCT 481
QY 513 CGAGCGCGCTTTCGCGCGCTTTCACCGCGTGGTTTCCACAGCTACGAGAGGTACGCGGAGTT 572
Db 482 CGAGGTGGCGCGCTCGCGCTCGGGCCCTGGCGCAGCGTTCATCGAGAGCTCAACGGTGT 541
QY 573 CAGCTTGGCGAGGTGGCGCGCAAGATCGCGCTGGCGGCGCAAGCGCTGGCGGCGAGCGGA 632
Db 542 GCGCTGCTCAGCGAGGATGACCCACCCCAACCTGTCGCGTGGACCGAGGACTACTGCGC 601
QY 633 GAGCTCGCAAGAGCTTCTACTCGCGCGGACAAGGTGTAGGACTTCTATCGGCTGCTCAA 692
Db 602 CTTGAGGCTTCTCAAGCGTGTGATCGCGATCGGGAGAGTCTCTCGCTACTTCACTAA 661
QY 693 GAAGAAGTACGGCATCGAGTAGCGCGCGCGAGCGAGCGGACCGAGCGGCGCCATGCG 747
Db 662 GAATTCGACAGGTACAAAGCGCGCTCAATGCGACGCTATCGCAGTCGACGAG 716

RESULT 15
US-09-248-335-9
; Sequence 9, Application US/09248335
; Patent No. 6056504
; GENERAL INFORMATION:
; APPLICANT: MCGONIGLE, BRIAN
; APPLICANT: O'KEEFE, DANIEL
; TITLE OF INVENTION: PLANT GLUTATHIONE-S-TRANSFERASE ENZYMES
; FILE REFERENCE: CL-1128-A
; CURRENT APPLICATION NUMBER: US/09/248,335
; CURRENT FILING DATE: 1999-02-10
; EARLIER APPLICATION NUMBER: 08/924,759
; EARLIER FILING DATE: 1997-September-05
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Microsoft Word Version 7.0A
; SEQ ID NO 9
; LENGTH: 911
; TYPE: DNA
; ORGANISM: maize
; US-09-248-335-9

Query Match 18.0%; Score 195; DB 3; Length 911;
Best Local Similarity 57.5%; Pred. No. 1.5e-31;
Matches 411; Conservative 0; Mismatches 295; Indels 9; Gaps 3;
QY 39 GGGAGCAATGGCGGCGAGAGGGGCTGGTCTGCTGCACTTCTGGGTGAGCCCGTTGCG 98
Db 5 GGTGCACATGTGCTCTCCGCGCGGTGAAGCTGATCGGCTTCTTCGGAGCCCGTACGC 64

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OM nucleic - nucleic search, using sw model

Run on: June 27, 2003, 03:12:20 ; Search time 1016 Seconds
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Title: US-09-508-710-1

Perfect score: 1085

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Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 1055720 seqs, 742224136 residues

Total number of hits satisfying chosen parameters: 2111440

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications NA:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
C 1	191.8	17.7	945	10	US-09-770-445-348 Sequence 348, App
2	170.6	15.7	737	10	US-09-770-149-77 Sequence 77, Appl
C 3	165.8	15.3	794	10	US-09-770-445-836 Sequence 836, App
C 4	155.6	14.3	866	10	US-09-770-445-573 Sequence 573, App
5	131.8	12.1	273	10	US-09-923-876-1124 Sequence 1124, App
6	120.6	11.1	385	10	US-09-878-574-752 Sequence 752, App
7	114.6	10.6	267	10	US-09-923-876-1137 Sequence 1137, App
8	114.4	10.5	249	10	US-09-050-010-8 Sequence 8, Appli
9	111.4	10.3	257	10	US-09-923-876-1928 Sequence 1928, App
10	111.2	10.2	278	10	US-09-923-876-2599 Sequence 2599, App
11	110.4	10.2	260	10	US-09-923-876-2087 Sequence 2087, App
12	108.6	10.0	267	10	US-09-923-876-1232 Sequence 1232, App
13	106.4	9.8	261	10	US-09-923-876-2873 Sequence 2873, App
14	105.4	9.7	351	10	US-09-878-574-2942 Sequence 2942, App
15	103.2	9.5	268	10	US-09-923-876-3412 Sequence 3412, App
16	99.2	9.1	256	10	US-09-923-876-1617 Sequence 1617, App
17	99	9.1	345	10	US-09-770-791-782 Sequence 782, App
18	98	9.0	247	10	US-09-923-876-3035 Sequence 3035, App
19	96.2	8.9	234	10	US-09-923-876-2550 Sequence 2550, App

20	93.6	8.6	251	10	US-09-923-876-1962 Sequence 1962, App
21	91.6	8.4	274	10	US-09-923-876-4952 Sequence 4952, App
22	91.2	8.4	234	10	US-09-923-876-3102 Sequence 3102, App
23	90	8.3	257	10	US-09-923-876-2582 Sequence 2582, App
24	88.8	8.2	253	10	US-09-923-876-2051 Sequence 2051, App
25	87.2	8.0	684	9	US-09-938-842A-695 Sequence 695, App
26	87	8.0	705	9	US-09-938-842A-2658 Sequence 2658, App
C 27	86.6	8.0	797	10	US-09-770-445-827 Sequence 827, App
C 28	86.4	8.0	824	10	US-09-770-445-717 Sequence 717, App
29	85.4	7.9	234	10	US-09-923-876-3383 Sequence 3383, App
30	84.6	7.8	335	10	US-09-770-791-918 Sequence 918, App
31	82.8	7.6	378	9	US-09-938-842A-2405 Sequence 2405, App
32	82.6	7.6	249	10	US-09-923-876-939 Sequence 939, App
33	82.4	7.6	513	9	US-09-938-842A-1665 Sequence 1665, App
34	82.2	7.6	678	10	US-09-887-576-642 Sequence 642, App
35	80.8	7.4	269	10	US-09-878-574-7605 Sequence 7605, App
36	80.6	7.4	255	10	US-09-923-876-875 Sequence 875, App
37	79.4	7.3	264	10	US-09-923-876-627 Sequence 627, App
38	78.8	7.3	684	9	US-09-938-842A-2676 Sequence 2676, App
39	78.6	7.2	270	10	US-09-878-574-9297 Sequence 9297, App
40	78.6	7.2	675	9	US-09-938-842A-2186 Sequence 2186, App
C 41	78.2	7.2	817	10	US-09-770-445-743 Sequence 743, App
42	77	7.1	250	10	US-09-923-876-551 Sequence 551, App
43	76.8	7.1	362	10	US-09-878-574-3077 Sequence 3077, App
44	75.8	7.0	244	10	US-09-923-876-204 Sequence 204, App
45	71.2	6.6	15024	9	US-09-843-250-11 Sequence 11, Appl

ALIGNMENTS

RESULT 1
US-09-770-445-348/c
; Sequence 348, Application US/09770445
; Patent No. US20020023281A1
; GENERAL INFORMATION:

; APPLICANT: Gorlach, Jorn
; APPLICANT: An, Yong-Qiang
; APPLICANT: Hamilton, Carol M.
; APPLICANT: Price, Jennifer L.
; APPLICANT: Raines, Tracy M.
; APPLICANT: Yu, Yang
; APPLICANT: Rameaka, Joshua G.
; APPLICANT: Page, Amy
; APPLICANT: Matthew, Abraham V.
; APPLICANT: Ledford, Brooke L.
; APPLICANT: Woessner, Jeffrey P.
; APPLICANT: Haas, William David
; APPLICANT: Garcia, Carlos A.
; APPLICANT: Krickler, Maja
; APPLICANT: Slader, Ted
; APPLICANT: Davis, Keith R.
; APPLICANT: Allen, Keith
; APPLICANT: Hoffman, Neil
; APPLICANT: Hurban, Patrick
; TITLE OF INVENTION: Expressed Sequences of Arabidopsis
; TITLE OF INVENTION: thaliana
; FILE REFERENCE: 2023US (PARA-012PRV)
; CURRENT APPLICATION NUMBER: US/09/770,445
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/178,472
; PRIOR FILING DATE: 2000-01-27
; NUMBER OF SEQ ID NOS: 999
; SOFTWARE: Fast-Seq for Windows Version 4.0
; SEQ ID NO 348
; LENGTH: 945
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-770-445-348

Query Match 17.7%; Score 191.8; DB 10; Length 945;
Best Local Similarity 56.8%; Pred. No. 4.3e-44;
Matches 374; Conservative 0; Mismatches 282; Indels 3; Gaps 1;


```

; APPLICANT: Price, Jennifer L.
; APPLICANT: Raines, Tracy M.
; APPLICANT: Yu, Yang
; APPLICANT: Rameaka, Joshua G.
; APPLICANT: Page, Amy
; APPLICANT: Matthew, Abraham V.
; APPLICANT: Ledford, Brooke L.
; APPLICANT: Woessner, Jeffrey P.
; APPLICANT: Haas, William David
; APPLICANT: Garcia, Carlos A.
; APPLICANT: Kricker, Maja
; APPLICANT: Slader, Ted
; APPLICANT: Davis, Keith R.
; APPLICANT: Allen, Keith
; APPLICANT: Hoffman, Neil
; APPLICANT: Hurban, Patrick
; TITLE OF INVENTION: thaliana
; FILE REFERENCE: 2023US (PARA-012PRV)
; CURRENT FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/178,472
; NUMBER OF SEQ ID NOS: 999
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 836
; LENGTH: 794
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (1)..(794)
; OTHER INFORMATION: n = A,T,C or G
US-09-770-445-836

Query Match
Best Local Similarity 15.3%; Score 165.8; DB 10; Length 794;
Matches 351; Conservative 0; Mismatches 298; Indels 3; Gaps 1;

QY 59 AGGGGTGGTGTCTGGTCTGACTTCTGGGTGAGCCGGTTCGGGCGAGCGGTGCGCATCGCG 118
Db 791 ACAGGTGATCTCTTGATTTCTGGCCGAGCATGTTTGAATGAGCAGAGATTGCTT 732

QY 119 TGGCGGAGAGGCGCTGCCCTCAGATACCGGAGGAGGACCTGATGGCGCGCAAGAGCG 178
Db 731 TAGAAGAGAAAATGTCAAAATTCGATTACAGAGAACAGATCTGTGAA---CAAAAGCC 675

QY 179 ACCGCTCTCCGCGCCCAACCGGTGATAGAGATCCCGGTGCTCTCCACAGCGCC 238
Db 674 CGATTCTCTCGAGATGAATCCCGGTTTCATAGAAATACNNNNNTCATCAATGGTN 615

QY 239 GTCCCGTCAACGAGTCCCTCATCTCCAGTACCTCGGAGGAGGCTTCCCGAGCGC 298
Db 614 NTCCGGTATGTGATCACTCATCCAGATCGAATACATCGAGAGTTTGGCCTAGCAAA 555

QY 299 CGGCTGTGCTCCCTCGACCCCTACGCGCGCGGAGGCGCGCTTCTTGGGCGACTACG 358
Db 554 CCCCACTCTCTCTCTGTGATCTTACCAAGAGCTCAGGCCAAATTTTGGGGAGATTCA 495

QY 359 TCACACAGAGGTCATGACTGCGGCTCCGCTCTGGAAGCTCAAGGGCGAGCCGAGG 418
Db 494 TTGATAAGAGAGGTGTATGCTTTCAGCGAGGTGTGATTTTGGGAGGCTAAAGGCGAAGCATG 435

QY 419 CGCAGGCGCGCGGAGATGCTGACATCTCTCAAGACCTTCGACGCGCGCTCGGGGACA 478
Db 434 AGCGGGGAGAGAGGATTCATCGAGTACTCAAGACACTAGAGTCTGAGCTTGGAGACA 375

QY 479 AGCCCTTCTTTCGGGCGGACAAAGTTCCGGTTCGTCGACGCGCGCTTCGCGCCCTTCA 538
Db 374 AGACTTACTTTGGAGGTGAAACATTCGGTTATGTTGATATAGCTCTCATTTGGATTTACA 315

QY 539 CGTGGTTCCACAGTACGAGAGGTACCGAGGTTACGCTTGCAGGAGGTGGCGCCCAAGA 598
Db 539 CGTGGTTCCACAGTACGAGAGGTACCGAGGTTACGCTTGCAGGAGGTGGCGCCCAAGA 598

Db 314 GTTGTTGAAGCGTATGAGAAAGTTTGGGAGTTTTCAGATTGAAGCCGAGTGTCCAAAAC 255
QY 599 TCGCCCGGTGGGCAAGCGCTCGCGGAGCGGCGGAGAGCGTGCACCAAGAGCTCTACTCGC 658
Db 254 TGATNNCTTGGGGTAAAGGTGTGTGAGAGAGAGAGTGTGGCTAAGTCTCTTCCCTGATT 195
QY 659 CGGACAAAGGTGTACGACTTCATCGGCCTGCTCAAGAAGAAGTACGGCATCGA 710
Db 194 CGGAGAAGATCATTAAGTTCGTTCTCTCGAGCTAAGGAAAAAACTTGGGATCGA 143

RESULT 4
US-09-770-445-573/c
; Sequence 573, Application US/09770445
; Patent No. US20020023281A1
; GENERAL INFORMATION:
; APPLICANT: Gorlach, Jorn
; APPLICANT: An, Yong-Qiang
; APPLICANT: Hamilton, Carol M.
; APPLICANT: Price, Jennifer L.
; APPLICANT: Raines, Tracy M.
; APPLICANT: Yu, Yang
; APPLICANT: Rameaka, Joshua G.
; APPLICANT: Page, Amy
; APPLICANT: Matthew, Abraham V.
; APPLICANT: Ledford, Brooke L.
; APPLICANT: Woessner, Jeffrey P.
; APPLICANT: Haas, William David
; APPLICANT: Kricker, Maja
; APPLICANT: Slader, Ted
; APPLICANT: Davis, Keith R.
; APPLICANT: Allen, Keith
; APPLICANT: Hoffman, Neil
; APPLICANT: Hurban, Patrick
; TITLE OF INVENTION: Expressed Sequences of Arabidopsis
; FILE REFERENCE: 2023US (PARA-012PRV)
; CURRENT FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/178,472
; NUMBER OF SEQ ID NOS: 999
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 573
; LENGTH: 866
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-770-445-573

Query Match
Best Local Similarity 14.3%; Score 155.6; DB 10; Length 866;
Matches 348; Conservative 0; Mismatches 299; Indels 3; Gaps 1;

QY 65 TGTGTGCTGTGGACTTCTGGGTGAGCCCGTTCGGGCGAGCGCTGCGCATCGCGCTGCGC 124
Db 850 TGATTCTTCTGATTACTGGCCAAGCATGTTCGGGATGAGGACGAAGATGGCTTTGGCTG 791

QY 125 AGNAGGCGCTGCCCTACGAGTACGCGGAGGAGGACCTGATGCGCGGCAAGAGGACCGCC 184
Db 790 AGAAGGAGTCAAGTATGAGTACAAGAAAACAGATCCATGGGT---TAAGACTCTCTTAC 734

QY 185 TCCTCCGCGCCCAACCGGTGCATAAGAAGATCCCGGTGCTCTCCACGAGCGCGGCGC 244
Db 733 TATAGAGATGAACCCGATTCAAGAAGATTCCGGTTCCTCATCCAAACGGTAACCGCA 674

QY 245 TCAACGAGTCCCTCATCATCTCTCCAGTACTCGAGGAGGCGCTTCCCGGAGCGCGCTC 304
Db 673 TTTGTGAATCTCTTATTTCAGCTTGTAGTACATTGATGAGGTTTGGTCCGATGATCCCCAA 614

QY 305 TGTCTCCCTCCGACCCCTACGCGCGCGGCGGCGGCGCGCTTCTTGGGCGGAGTACGTGACA 364
Db 613 TCCTTCCCTCTGATCTCTTACCAGAGTCTCGAGCTAGATTTTGGGCTGAATTCATCGACA 554
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QY 365 AGAGTGTACGACTGGGCTCCGCTCTGGAGCTCAAGGCGAGCGCGAGCGCAGG 424
Db 553 AAAAGTTTACGACCCATCATGNAAGTATGGCAACAATGGCGGAAGAACATGCAGCAG 494
QY 425 CGCGCGCGAGATGCTGGACATCTCAAGACCTTCGACGGCGCTCGGGGCAAGCCCT 484
Db 493 TGAAGAGAAATTGTTGGACATTTCAAGACACTTGAGACAGAGCTCGGAGACAAACCTT 434
QY 485 TCTTCGCGCGGACAAAGTTTCGGTTCGTCAGCGCGCTTCGCGCCCTTCACCGCTGGT 544
Db 433 ATTACGGTGGTGAAGTATTGGATACCTAGACATTGCATTATGGGATACAGCTGGT 374
QY 545 TCACAGCTACGAGAGGTACGGAGTTTACGCTGCGGAGGTGGCGGCCAACAGATCGCCG 604
Db 373 TCAAGGCCATGGAGAAATTTGGTGAATTCAGTATCGAAACAGAGTTTCTTATATTGACTA 314
QY 605 CGTGGGCGAAGCGCTCGCGGAGGGGAGAGCGCTCCCAAGAGCCCTTACTCGCGGACA 664
Db 313 CGTGGACCAAGAGGTGTTGGAAGAGAGAGTGTGGTCAAGGCATTGGCTGATCTGATA 254
QY 665 AGGTGACGACTTCATCGGCTCTCAAGAGAAAGTACGCGCATCGAGTAG 714
Db 253 GGATCATTGATGTTTATGTTCTCTGAGGAAGAAATTTGGAGCAGCGTAG 204
RESULT 5
US-09-923-876-1124
; Sequence 1124, Application US/09923876
; Patent No. US20020013958A1
; GENERAL INFORMATION:
; APPLICANT: Lalundi, Raghunath V.
; APPLICANT: Kamigaki, Laura Y. (Ito)
; APPLICANT: Sherman, Bradley K.
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
; FILE REFERENCE: PL-0012-1 CON
; CURRENT APPLICATION NUMBER: US/09/923,876
; PRIOR FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: 09/298,329
; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 60/085,331
; PRIOR FILING DATE: 1998-05-05
; NUMBER OF SEQ ID NOS: 6332
; SOFTWARE: PERL Program
; SEQ ID NO 1124
; LENGTH: 273
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No. US20020013958A1 700158152H1
; NAME/KEY: unsure
; LOCATION: 171
; OTHER INFORMATION: a, t, c, g, or other
US-09-923-876-1124
Query Match 12.1%; Score 131.8; DB 10; Length 273;
Best Local Similarity 74.6%; Pred. No. 2.2e-27;
Matches 179; Conservative 0; Mismatches 58; Indels 3; Gaps 1;
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Db 34 CAATGGCGGGGAGAGAGAGCTGAAGTGTGCGCGGTGTGGAGAGCCCGTTGTGATCC 93
QY 104 CGCTGCCATCGCCTGGCGGAGAGGCGCTTCCCTACGAGTACGCGAGAGAGACTGA 163
Db 94 GGGTCCGATCGTCTCACTGAAGGCGCTTGGCGTACGAGTACGTGGAGAGAGCTCA 153
QY 164 TGGCGGCAAGAGAGCGCGCTCTCCGCGCAACCGGTGTCATGAAGATCCCGGTGC 223
Db 154 --GCAACAAGAGCGCGCTCTCTCTGGGTCCACCCGCGTGCACAGAGCGTGGGTGC 210
QY 224 TCCTCCAGAGCGCGCGTGGCGTCAACGAGTCCCTCATCATCTCCAGTACCTGAGAGG 283

Db 211 TCCTCCAGCGCGCGCCATATAAGAGTCCCAAGTTCATCTCGAGTACATCGACGAG 270
RESULT 6
US-09-878-574-752
; Sequence 752, Application US/09878574
; Patent No. US20020110548A1
; GENERAL INFORMATION:
; APPLICANT: Byrum, Joseph R.
; APPLICANT: Thompson, Michael D.
; APPLICANT: La Rosa, Thomas J.
; TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated with
; FILE REFERENCE: 38-21(15401)B
; CURRENT APPLICATION NUMBER: US/09/878,574
; CURRENT FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 09/333,535
; PRIOR FILING DATE: 1999-06-14
; NUMBER OF SEQ ID NOS: 15775
; SEQ ID NO 752
; LENGTH: 385
; TYPE: DNA
; ORGANISM: Glycine max
; OTHER INFORMATION: Clone ID: LIB3028-046-Q1-B1-H10
US-09-878-574-752
Query Match 11.1%; Score 120.6; DB 10; Length 385;
Best Local Similarity 63.3%; Pred. No. 3.6e-24;
Matches 202; Conservative 0; Mismatches 114; Indels 3; Gaps 1;
QY 59 AGGGGTGTGTGTGTGACTTCTGGGTGAGCCCGTTCGGGAGCGCGTTCGCGATCGCG 118
Db 50 ATGAGGTGTTCTGTAGATTTTCGCCAAGTCCATTTGGGATGAGGGTTCAGGATTCAC 109
QY 119 TGGCGGAGAGGCGCTCCCTACGAGTACGCGAGGAGGACCTGATGGCGCGCAAGCG 178
Db 110 TTGCTGAAAGGGTATCAAAATATGATGACAAAGAGAGGACTTGAGG---AACAAGATC 166
QY 179 ACCGCTCTCCGCGCAACCGGTGCATAAAGATCCCGGTGCTCTCCACAGCGGC 238
Db 167 CTCTTCTCTCCAAATGAACCGGTTCACAAGAGATTCGGTTCATCCACATGGCA 226
QY 239 GTGCGGTCAACGAGTCCCTCATCATCTCCAGTACCTGGAGAGGCGCTTCCCGGAGCGC 298
Db 227 AACCCATTTGTGAATCCCTCATTTGTTTCAATTCAGTACATTCAGGACGTTTGAATGACAGAA 286
QY 299 CGCTCTGCTCCCTCCGACCCCTACGCGCGCGCGAGGCGCTTCTGGGCGGACTAG 358
Db 287 ATCCCTTGTGCTCTCTGACCCCTTACGAGAGCTCAAGCTAGATTCTGGGCTGATTATG 346
QY 359 TCGACAAGAAGGTCTACGA 377
Db 347 TTGATAAGAAGATATATGA 365
RESULT 7
US-09-923-876-1137
; Sequence 1137, Application US/09923876
; Patent No. US20020013958A1
; GENERAL INFORMATION:
; APPLICANT: Lalundi, Raghunath V.
; APPLICANT: Kamigaki, Laura Y. (Ito)
; APPLICANT: Sherman, Bradley K.
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
; FILE REFERENCE: PL-0012-1 CON
; CURRENT APPLICATION NUMBER: US/09/923,876
; PRIOR FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: 09/298,329
; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 60/085,331
; PRIOR FILING DATE: 1998-05-05
; NUMBER OF SEQ ID NOS: 6332


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QY 246 CACGAGTCCCTCATCATCTCCAGTACCTCGAGGAGGCTTCCCGGACGCGCGCTCT 305
Db 180 CTCGAGTCCCTCATCATCGCCGAGTACGTCGACGAGGCTTC--GACGGCGCGCGCT 236
QY 306 GCTCCCTCCGACCCCTACGC 326
Db 237 GCTCCCGCGCGCCCTACGC 257

RESULT 10
US-09-923-876-2599
; Sequence 2599, Application US/09923876
; Patent No. US20020013958A1
; GENERAL INFORMATION:
; APPLICANT: Lalgudi, Raghunath V.
; APPLICANT: Kamigaki, Laura Y. (Ito)
; APPLICANT: Sherman, Bradley K.
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
; FILE REFERENCE: PL-0012-1 CON
; CURRENT FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: US/09/923,876
; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 09/298,329
; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 60/085,331
; PRIOR FILING DATE: 1998-05-05
; NUMBER OF SEQ ID NOS: 6332
; SOFTWARE: PERL Program
; SEQ ID NO 2599
; LENGTH: 278
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20020013958A1 700160869H1
; LOCATION: 52, 262, 272, 277
; OTHER INFORMATION: a, t, c, g, or other
US-09-923-876-2599

Query Match 10.2%; Score 111.2; DB 10; Length 278;
Best Local Similarity 68.6%; Pred. No. 1.4e-21;
Matches 168; Conservative 0; Mismatches 74; Indels 3; Gaps 1;

QY 126 GAAGGCGCTCCCTACGAGTACGCGGAGGAGGACCTGATGCGCGGCAAGAGCGCGCT 185
Db 5 GAAGGCGCTCGAGTACGAGTACGTCGACGAGGACC--TCGCCAACAAAGACGCGGACCT 61
QY 186 CTTCCGCGCAACCCGCTGATAGAGATCCCGGTCTCTCCACGACGCGCGTCCGT 245
Db 62 GCTCCGCGCAACCCGCTGACCAAGAGGTGCGCGTCTCTCCACGACGCGCAAGCGGT 121
QY 246 CAACGAGTCCCTCATCATCTCCAGTACCTCGAGGAGGCGCTTCCCGACGCGCGCTCT 305
Db 122 CGCGAGTCCACCATCATCTCGTGAATACATCGACGAGTCTGGAAGGCGGTACCCCAT 181
QY 306 GCTCCCTCCGACCCCTACGCGCGCGCGGCGCGGCTTCTGGGCGGACTACGTCGACAA 365
Db 182 CATGCGGGGACCCCTACGAGCGCGCCGCGGCGGAGGTCTTGGGCCAAGTTCCGGGAAGA 241
QY 366 GAAGG 370
Db 242 CAATG 246

RESULT 11
US-09-923-876-2087
; Sequence 2087, Application US/09923876
; Patent No. US20020013958A1
; GENERAL INFORMATION:
; APPLICANT: Lalgudi, Raghunath V.
; APPLICANT: Kamigaki, Laura Y. (Ito)
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; APPLICANT: Sherman, Bradley K.
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
; FILE REFERENCE: PL-0012-1 CON
; CURRENT APPLICATION NUMBER: US/09/923,876
; CURRENT FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: 09/298,329
; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 60/085,331
; PRIOR FILING DATE: 1998-05-05
; NUMBER OF SEQ ID NOS: 6332
; SOFTWARE: PERL Program
; SEQ ID NO 2087
; LENGTH: 260
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20020013958A1 700160031H1
; NAME/KEY: unsure
; LOCATION: 247
; OTHER INFORMATION: a, t, c, g, or other
US-09-923-876-2087

Query Match 10.2%; Score 110.4; DB 10; Length 260;
Best Local Similarity 70.7%; Pred. No. 2.3e-21;
Matches 176; Conservative 0; Mismatches 67; Indels 6; Gaps 2;

QY 87 GAGCCCGTTCCGGCGAGCGGTGCGCATCGCGTGGCGCGGAGAGGGGCTGCCCTACGAGTA 146
Db 3 GAGCCCGTTCCGTGATCCGCGTCTGATCGCCCTGAAGCTGAAGGGCGTGCAGTTCGAGTT 62
QY 147 CGCGGAGGAGGACCTGATGCGCGGCAAGAGCGACCGCTCTCCCGCGGCAACCCCGTGCA 206
Db 63 CGTGAGGAGG--TGGTGGCGAGGAGAGCGAGTGTCTGCTGAGTCCGAACCCCGTGCA 119
QY 207 TAAGAGATCCCGGTCTCTCCACGACGCGCGTGCCTCAACGAGTCCCTCATCATCTCT 266
Db 120 CAAGAAGATCCCGCGTCTCTCCACGACGCGGAGCCCATCTCCGCGCGCGGCTTCTTCTGATCATCGT 179
QY 267 CCAGTACCTGGAGGAGGCGC---TTCCCGGACGCGCGCGCTCTGCTCCCTCCGACCCCTA 323
Db 180 CCAGTACATCGACGAGTCTGCTCTCCGCGCGCGGCTTCTTCTCCCGCGGAGCTCA 239
QY 324 CGCGCGCGC 332
Db 240 CGCCCGCNC 248

RESULT 12
US-09-923-876-1232
; Sequence 1232, Application US/09923876
; Patent No. US20020013958A1
; GENERAL INFORMATION:
; APPLICANT: Lalgudi, Raghunath V.
; APPLICANT: Kamigaki, Laura Y. (Ito)
; APPLICANT: Sherman, Bradley K.
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN SEEDLING
; FILE REFERENCE: PL-0012-1 CON
; CURRENT FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: 09/298,329
; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 60/085,331
; PRIOR FILING DATE: 1998-05-05
; NUMBER OF SEQ ID NOS: 6332
; SOFTWARE: PERL Program
; SEQ ID NO 1232
; LENGTH: 267
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20020013958A1 700158349H1
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[illegible][illegible]

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; PRIOR FILING DATE: 1999-04-21
; PRIOR APPLICATION NUMBER: 60/085,331
; PRIOR FILING DATE: 1998-05-05
; NUMBER OF SEQ ID NOS: 6332
; SOFTWARE: PERL Program
; SEQ ID NO 3412
; LENGTH: 268
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20020013958A1 700162217H1
; NAME/KEY: unsure
; LOCATION: 17, 35, 65-87, 89, 162-163, 211, 230, 242, 263
; OTHER INFORMATION: a, t, c, g, or other
US-09-923-876-3412

Query Match          9.5%; Score 103.2; DB 10; Length 268;
Best Local Similarity 66.2%; Pred. No. 2.5e-19;
Matches 139; Conservative 0; Mismatches 68; Indels 3; Gaps 1;

QY 33 GCAACCGGAGCAATGGCGGCGAGAGGGGCTGGTGTGCTGGACTTCTGGGTGAGCCC 92
    ||| |
Db 59 GCAGCTNNNNNNNNNNNNNNNNNNNNNNNANGTCGTGCTGCTGGACTTCTGGTGA 118
    ||| |
QY 93 GTTCGGGCGAGCGGTGCGCATCGCTGGCCGAGAGGGGCTGCCCTACGAGTACGCGGA 152
    ||| |
Db 119 CTTGGGCGAGCGGTGCGCATCGCTGGCCGAGAGGGGCTTNNCTACGAGTACGCGGA 178
    ||| |
QY 153 GGAGGACCTGATGGCGGCGAGAGCGACCGCTCTCCCGGCCAACCCGGTGCAAGAA 212
    ||| |
Db 179 GCAGGACCTCTCTG---GACAAATGGCGAGCTTCTCCNCAGTCCACCCCATCCANAAGAA 235
    ||| |
QY 213 GATCCCGGTGCTCTCTCCACGACGCGGTGC 242
    ||| |
Db 236 GATCCCGGTCTCTCTCCACGCGGCGAGNCC 265
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Search completed: June 27, 2003, 14:32:21
Job time : 1018 secs